

Rediscovery of *Amorphophallus carnosus* (Araceae), a rare and narrow endemic species from South Andaman, India

M. Sivadasan* and V. Abdul Jaleel

Department of Botany, University of Calicut, Calicut University P.O.
673 635, Kerala, India

*e-mail: siva@unical.ac.in

Abstract

Amorphophallus carnosus Engl., a little known, rare and narrow endemic species has been rediscovered from South Andaman, after over 100 years of its first collection.

INTRODUCTION

Amorphophallus carnosus Engl., a little known, rare and narrow endemic species has been rediscovered from South Andaman, after it was first collected by Prain's collector in the year 1899. The protologue contained only a scanty and incomplete description and Srivastava and Rao (1993) in their account on aroids of Andaman and Nicobar Islands had stated that no subsequent collections of the species are available from the islands.

Prain's collector made the collections during the month of March, 1899 and reported to have flowered during April, 1899 (Engler, 1911). No later collections of the species are known to have been made. During a recent field trip carried out in connection with the research project on Revision of Indian Araceae, the species was rediscovered and collected both in flowering and vegetative stages during May, 1999 from its type locality - Andaman. The present collection is the second authentic collection of the species after over 100 years of its discovery and first collection.

Amorphophallus carnosus Engler, Pflanzenr. 48(IV. 23C): 93. 1911; Srivastava & Rao, Higher Pl. Ind. Subcont. IV: 23-38. 1993. (Figs. 1 & 2).

Tuberous herbs; tubers sub-globose, skin brownish, 2.5-7.5 cm diam. and 2.0-6.0 cm thick in vegetative phase, ca. 20 cm diam. and 14 cm thick in flowering phase. Roots numerous, 13-28 cm long, 0.2-0.3 cm thick, cream in colour. Leaf solitary, trichotomously decompound with petiole cylindrical, smooth, 70-208 cm long, 1.0-6.0 cm diam. at base, slightly tapering towards tip, dark greenish brown with few minute pale green mottlings, and

M. Sivadasan and V. Abdul Jaleel

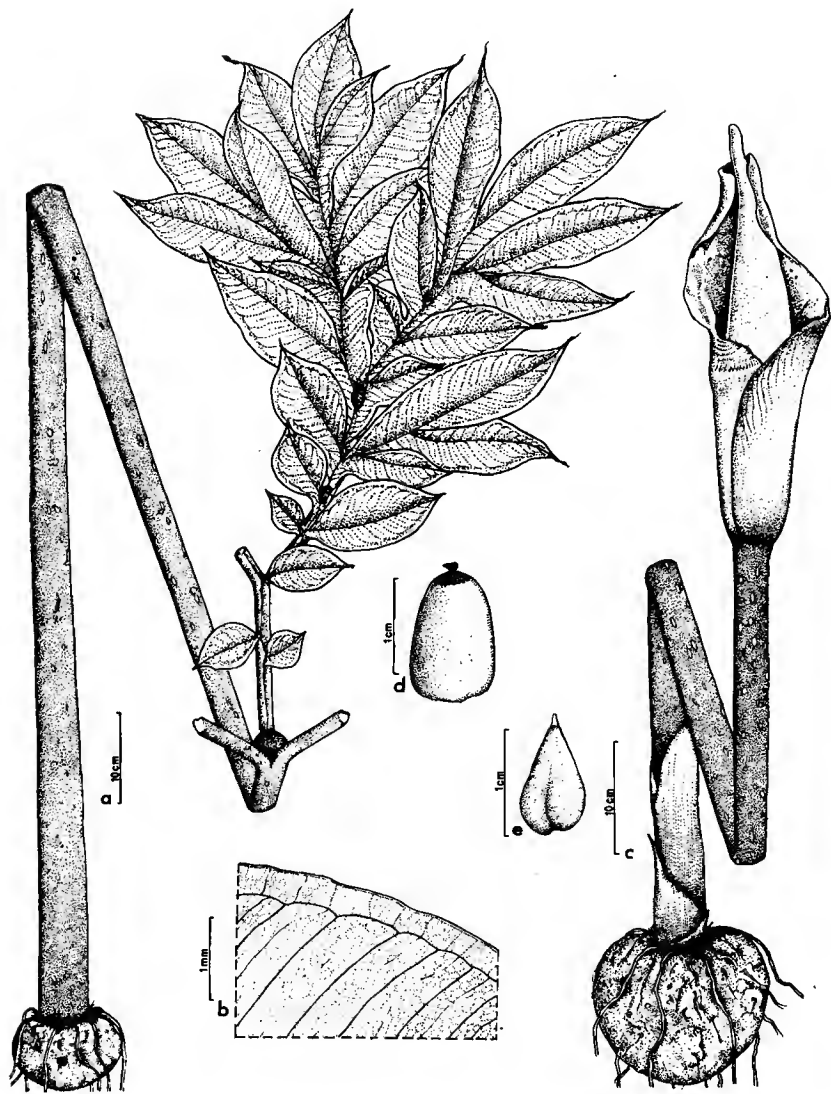


Fig. 1. *Amorphophallus carnosus* Engler. a. Habit - with leaf; b. A portion of a leaflet showing venation; c. Habit with inflorescence; d. A fruit; e. A seed.

Rediscovery of *Amorphophallus carnosus* (Araceae)

paler towards the tip; lamina 45-135 cm diam., leaflets sessile, ovate to elliptic-lanceolate, tip long-acuminate, and twisted in mature leaflets, base unequal and decurrent on rachis; small leaflets 5-9 cm long and 2.6-6.0 cm broad, large leaflets 18.8-23 cm long and 7-8 cm broad, margin undulate, green above and paler below; veins depressed above and projected below, secondary laterals close, united below the margin by arches forming a sub-marginal collective vein. Bulbils produced at the junction of rachises and along the rachises, each pale greenish in colour, sub-spherical, ca. 1.0 cm diam. and 0.2 cm thickness.

Inflorescence with the peduncle cylindrical, smooth, ca. 68 cm long, 4.0 cm diam., identical with petiole in colour and pattern of mottlings. Spathe ca. 39.5 cm long, ovate-oblong, differentiated into a basal convolute tube and an upper expanded limb; pale green outside with few minute white mottlings, and dark green minute mottlings towards the margin, basal portion with dark green dense mottlings; spathe-tube ca. 15.5 cm long and 7.5 cm diam. towards the base, rough within with irregular verruco-granulate protuberances; limb margin undulate, tip obtuse, purplish orange in colour inside, reddish pink above with small ovoid yellow mottlings, mottlings sparse towards the margin; vertical closely oriented veins are prominent on outer surface of the spathe. Spadix slightly longer than spathe, sessile, ca. 41 cm long, differentiated into a basal portion of female zone, followed by a male zone and an apical appendix. Female zone ca. 9.0 cm long, basally 4.5 cm diam. and tapering to 3.7 cm diam. at tip; male zone half the length of female zone, ca. 5.5 cm long, 3.3 cm diam. at base broadening towards the tip to 4.3 cm diam; spadix-appendix elongate-conical, ca. 28 cm long, 7 cm diam. at base and tapers towards the tip. Female flowers closely and sub-spirally arranged, the arrangement is irregular towards the base; each flower ca. 4 mm high, ovary sub-globose, ca. 1.5 mm high ca. 3 mm diam., reddish, 2-locular, each locule with a single basal anatropous ovule; style very short, ca. 1.5 mm long, 1.5 mm diam., pale red in colour; stigma 2 or 4-lobed, 2 mm diam., yellowish in colour. Male flowers closely arranged, sessile, each ca. 1.5 mm diam., 2 mm high, inconspicuously 2-lobed, yellowish in colour. Spadix-appendix sterile, elongate-conical, cream-coloured, slightly rough with minute depressions at base, and smooth towards the top. Fruit ovate elliptical, 1.2-1.5 cm long, 0.8-1.0 cm diam.; seeds 1-3 in number, 0.9-1.1 cm long, 0.5-0.6 cm diam.

Flowering: May.

Fruiting: Fruiting specimens could not be collected and hence not observed.

Distribution: A narrow endemic species known to occur only in Andaman islands.

Explanation of Fig. 2. *Amorphophallus carnosus* Engl. a. Inflorescence with spathe cut open showing spadix; b. Female flower; c. Female flower - L.S.; d. Ovary - C.S.; e. Stigma - view from top; f. Male flower - view from broad side; g. Male flower - view from top showing the openings; h. Male flower - L.S.; i. Male flower - C.S.; j. A small portion of the inner surface of spathe - enlarged; k. Cross section of a basal portion of spathe.

M. Sivadasan and V. Abdul Jaleel

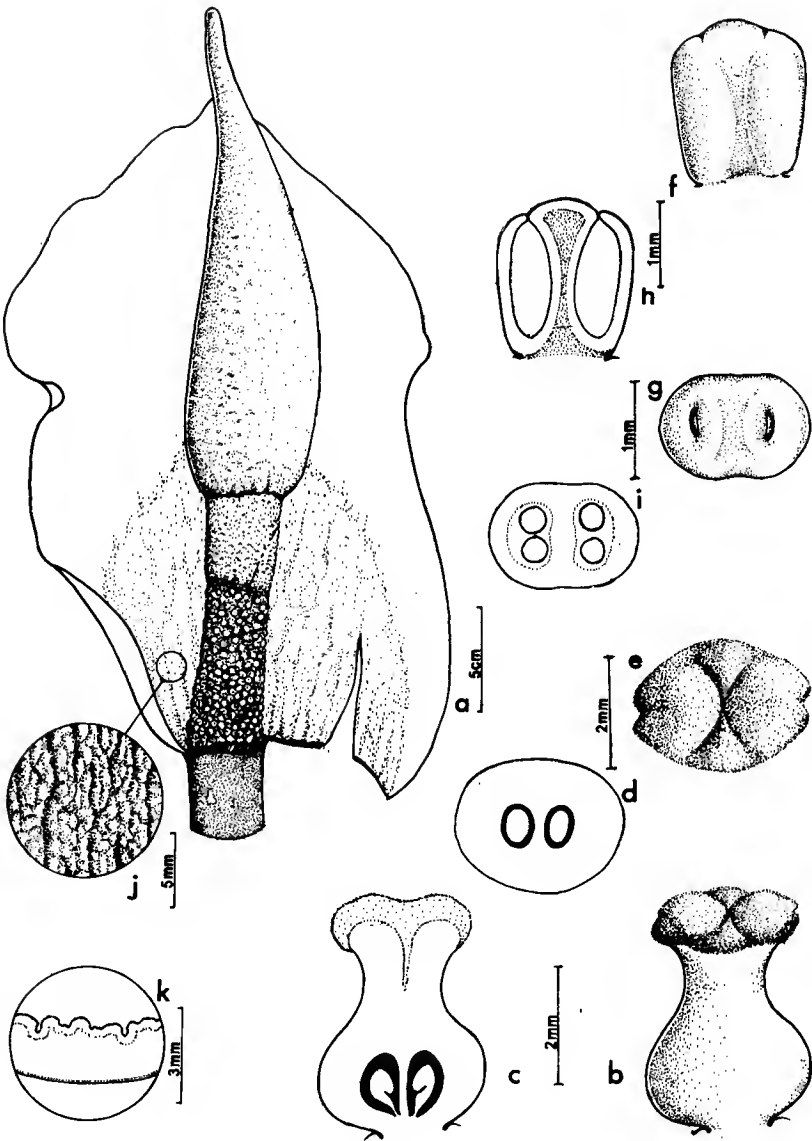


Fig. 2. *Amorphophallus carnosus* Engl. Inflorescence and flowers.

Rediscovery of *Amorphophallus carnosus* (Araceae)

Specimens examined: South Andaman, Ograbraj, 9 May 1999, *Abdul Jaleel RIA 335* (Inflorescence) (CALI); *ibid.*, 9 May 1999, *Abdul Jaleel RIA 336* (Leaf) (CALI); *ibid.*, 31 May 1999, *Abdul Jaleel RIA 369* (Leaf) (CALI).

In India there are about 16 species of *Amorphophallus*, of which three species viz., *A. carnosus* Engl., *A. longistylus* Kurz ex Hook. f. and *A. oncophyllus* Prain ex Hook. f. are strictly endemic to the Andaman Islands. Earlier *A. longistylus* had been rediscovered from the Islands after about 131 years of its first collection (Sivadasan & Jaleel, 1998).

The present species is quite remarkable in having a large erect spathe of about 39.5 cm long with prominently pale green colour outside, and purplish-orange colour at base; and reddish-pink above within.

Acknowledgements

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